

**CONTRA COSTA REGIONAL MEDICAL  
CENTER  
NOON CONFERENCE SERIES**

***DISCLOSURE OF CONFLICT OF INTEREST***

- Speaker has nothing to disclose



Health In  
Harmony



# Medicine on the Frontiers of Rain Forest Conservation: Healthcare to Heal the Planet

Kinari Webb MD



# Intertwined Human and Environmental Health



# Four Examples

- Deforestation → Increased Malaria
- Deforestation → Water Scarcity → Food Insecurity
- Pesticide and Herbicide Exposure: Bad for both
- Needing cash (for health care, cigarettes or food) leads to deforestation



# Ibu Shanti

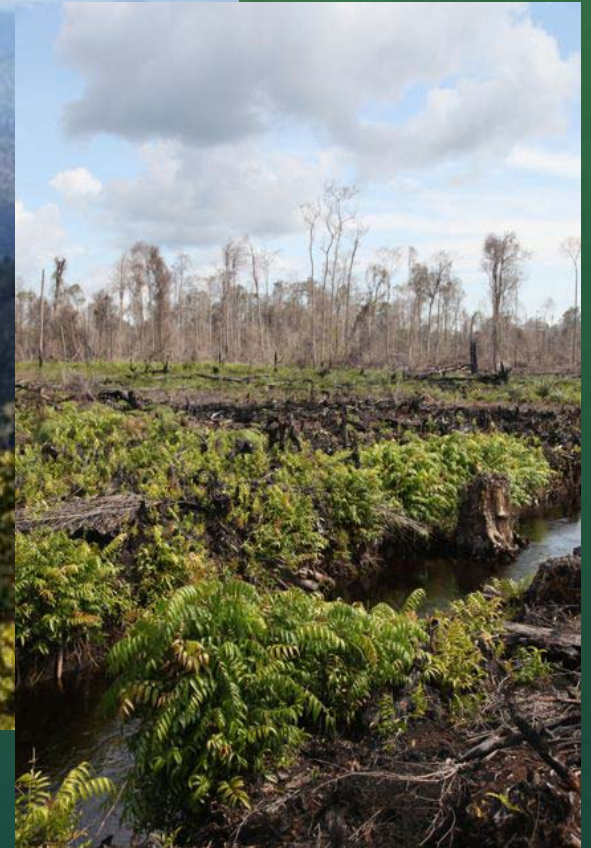




# Time is Running Out

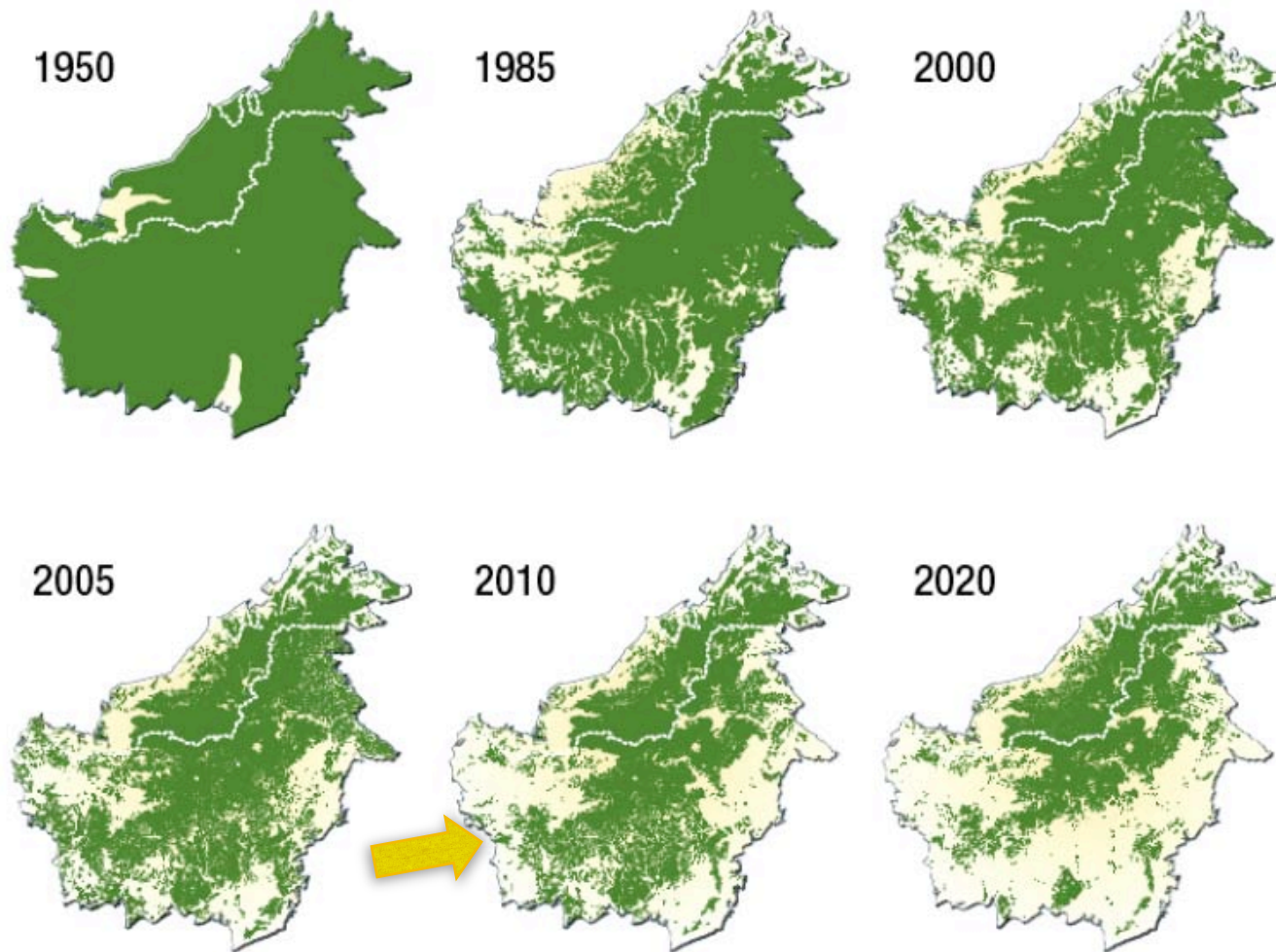


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# Borneo



# Bornean Rainforests

- Most biodiverse forests
- National Geographic calls Borneo the most critical conservation issue on the planet
- Gunung Palung is the jewel in the crown
- 10% of world's remaining orangutans
- Watershed for 60,000 people
- Reforestation very hard!





# Health In Harmony: Uniquely Positioned

- Providing High Quality Health Care – Virtuous cycle
- Community-designed Incentive system
- Means of paying without cash (people feel safe and don't have to do illegal logging)
- Alternative green income generation (organic farming, reforestation)
- Social capital (govt & comm.)



# Opened Clinic July 2007

- >20,000 patient visits
- 48 staff members
- Trained over 20 Indonesian doctors – “Internship”
- US residents, attendings, medical students & nurses
- DOTS program
- Eyeglasses/Cataracts





# Community-Designed Incentives

- If world was willing to say “thank you”, what would you want?
- Constant meetings, feedback, modifications
- Thousands of hours of meetings



# “That’s an ASRI”

- 4 WD Ambulance Service
- Mobile Clinic Visits
- Reforestation of 25 acres
- Mosquito net distribution
- Organic Farm Training
- Goats for Widows





# Pak Mustafarudin's Story





# Goats-for-Widows





# Next Steps

- Expand Health Services
- More Alternative Incomes
- Continued engagement with government
- Carbon Financing/Liquidity Solutions
- Understanding political economy of logging (underway)- evidence of impact
- Microfinance?

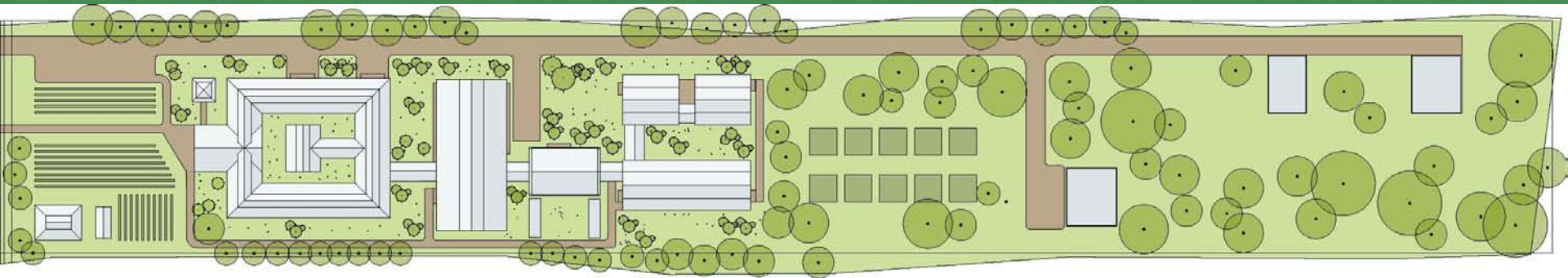


# Building the Mother-House

- Surgeries are the medical emergencies that put the most pressure on the forest
- C-sections essential to reduce maternal and child mortality
- Increase social capital
- Replication training center













# Be part of the vision!

- We have already raised \$500,000 out of 1 million
- \$20 per cement block
- \$200 per month for a nurse's salary
- \$600 per month for an Intern's salary
- \$10,000 per exam room
- \$100,000 community meeting room





Saving Lives Saving Rain Forest  
[www.healthinharmony.org](http://www.healthinharmony.org)



# Acknowledgments

- The government of Kayung Utara Regency in West Kalimantan.
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  - Kinari Webb
  - Lauren Tobias
  - Cam Webb







# The data (Esme Cullen and Hotlin Ompusunggu)

- Survey of 232 households
- Total Money Collectible=\$260
  - Loggers \$163
- 33% doing illegal logging
  - Median income \$326/yr
- Very high health care costs
  - 13% major medical last yr
  - Mean cost \$360
- 30% in debt (avg>\$100)
- Highly correlated with med emergencies ( $p= .01$ )

